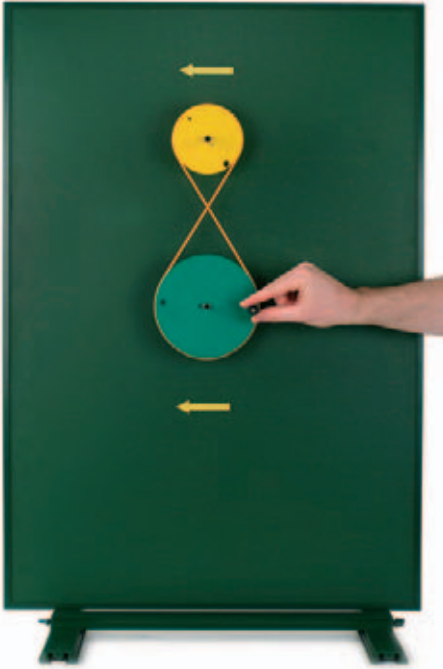




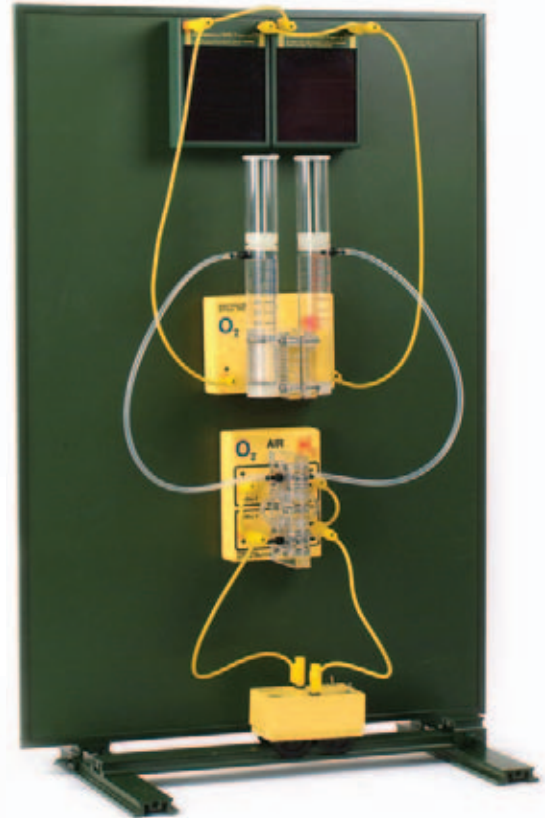
# inno - system



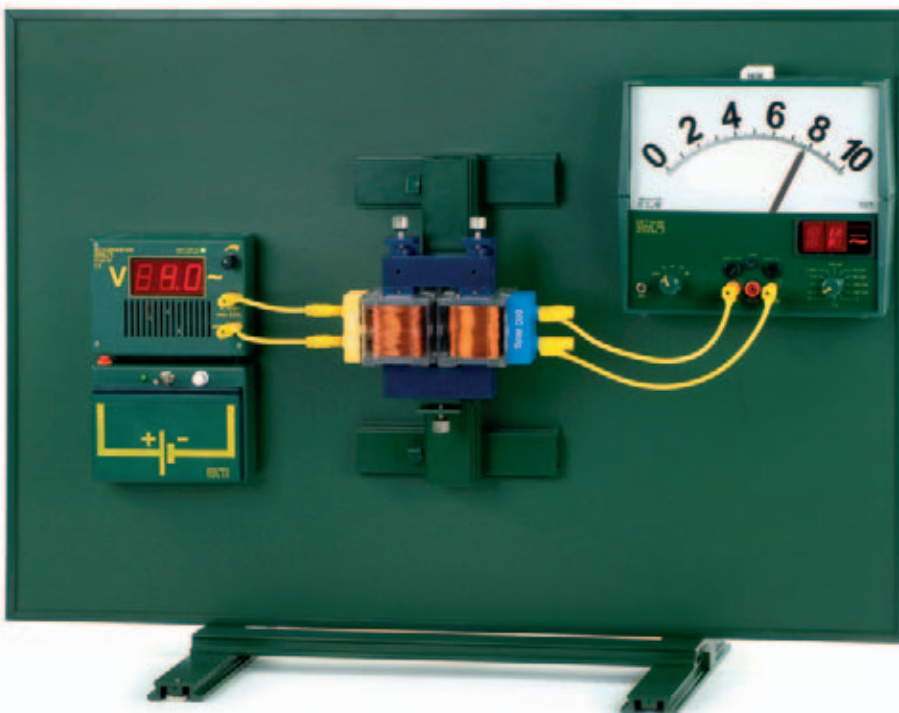
**Experiment:** Panel, green - belt drive



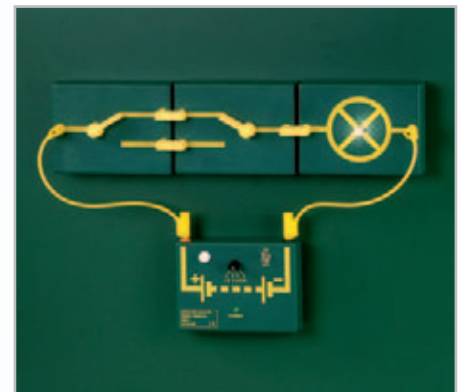
**Experiment:** panel, green - double wheel and axle



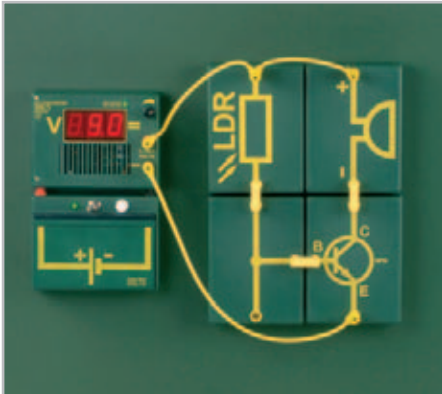
**Experiment:** panel, green - motor of the dynamics trolley powered by a fuel cell



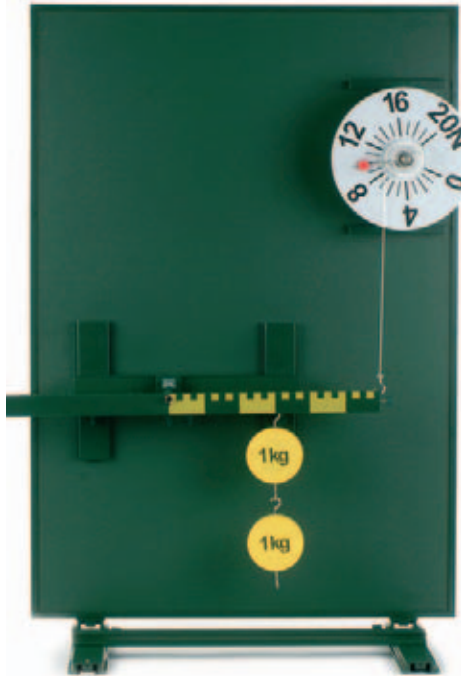
**Experiment:** Panel, green - transformer



**Experiment:** panel, green - two-way circuit



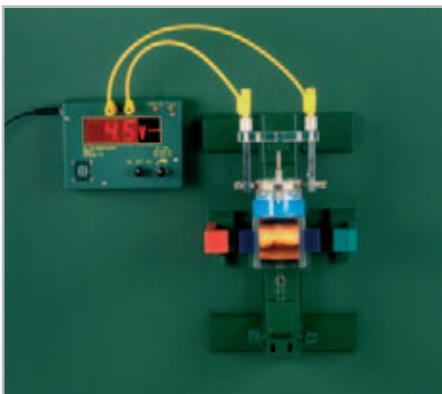
**Experiment:** Panel, green - LDR light-dependent resistor



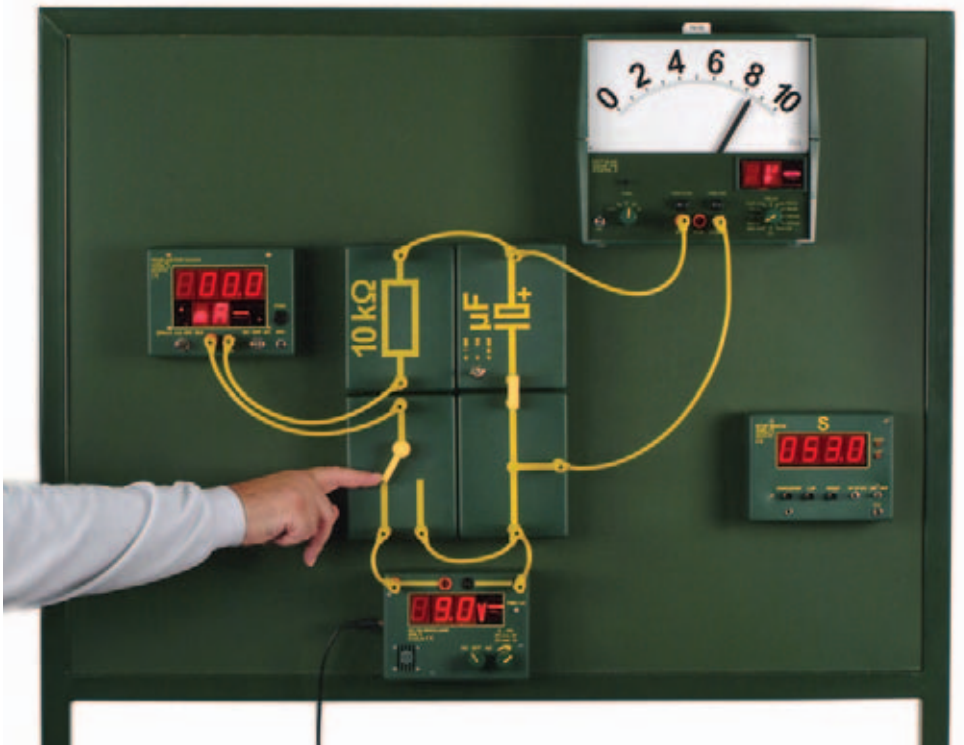
**Experiment:** Panel, green - one-sided lever



**Experiment:** Panel, green - dynamic pressure in an air stream



**Experiment:** Panel, green - electromotor



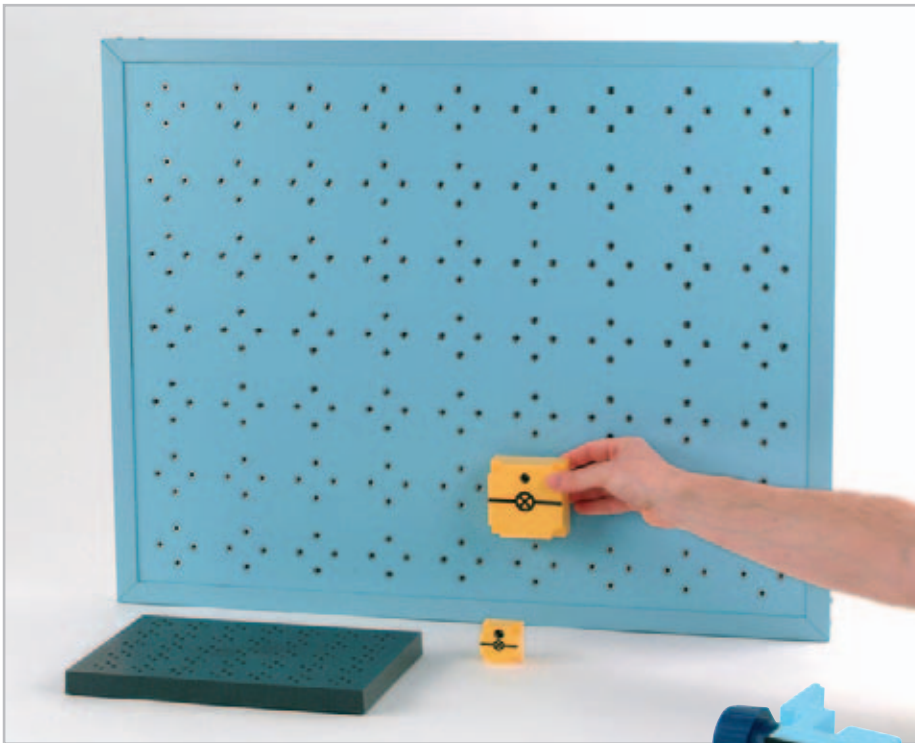
**Experiment:** Experiment board - charging and discharging a capacitor



**Experiment:** Panel, green - sources of voltage connected in series



# plug-in system - demo & students



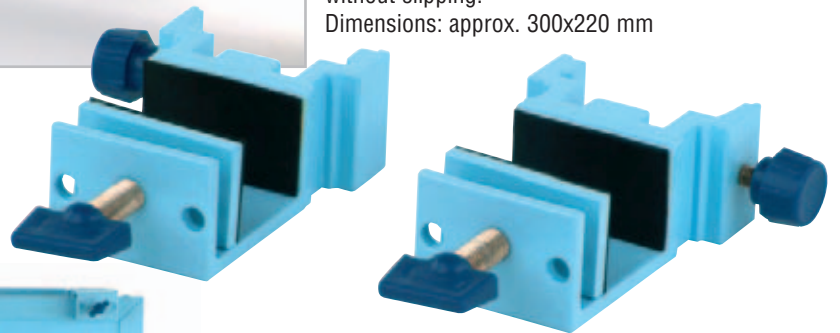
## DE920-1A Plug-in panel, demo

Assembly panel, blue plastic, for mounting and electrically connecting plug-in components DE920ff. 63 socket clusters each consisting of four 4-mm sockets arranged 40 mm apart which are not connected to each other, while adjacent socket clusters include electrical connections in every direction.

Back of the plug-in panel: metal panel, painted matt white, without holes; used as a magnetic panel especially for optics experiments with magnets; dimensions: approx. 800x632x34 mm

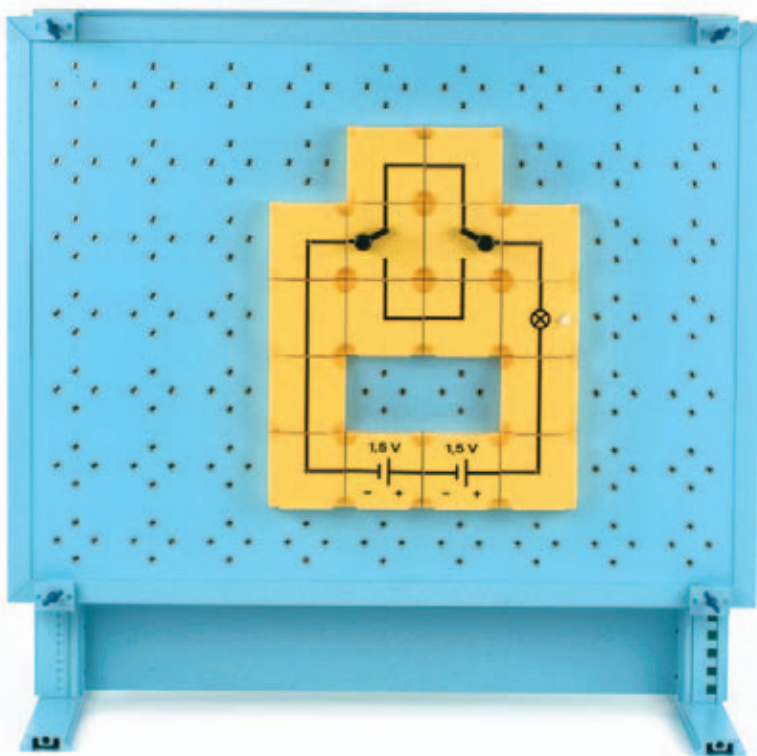
## P3910-1A Plug-in panel, small

Assembly panel, grey plastic, for mounting and electrically connecting plug-in components P3910ff. 35 socket clusters each consisting of four 4-mm sockets arranged 19 mm apart which are not connected to each other, while adjacent socket clusters include electrical connections in every direction. Back of the plug-in panel consists of a solid plastic panel with 4 rubber feet for setting it on the lab table without slipping. Dimensions: approx. 300x220 mm

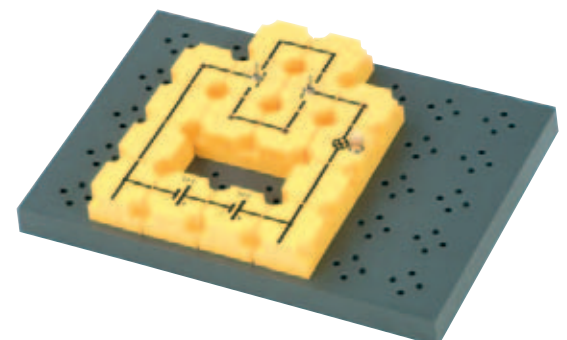


## DS503-1P Panel holders, pair

For stable mounting of panels up to 35 mm thick in a vertical position; aluminium u-profile with clamping jaws and wing screws permanently mounted on a sliding saddle with wing screw; may be clamped to a vertical stand rail assembly or assembly panel DS602-2A; light-blue powder-coated

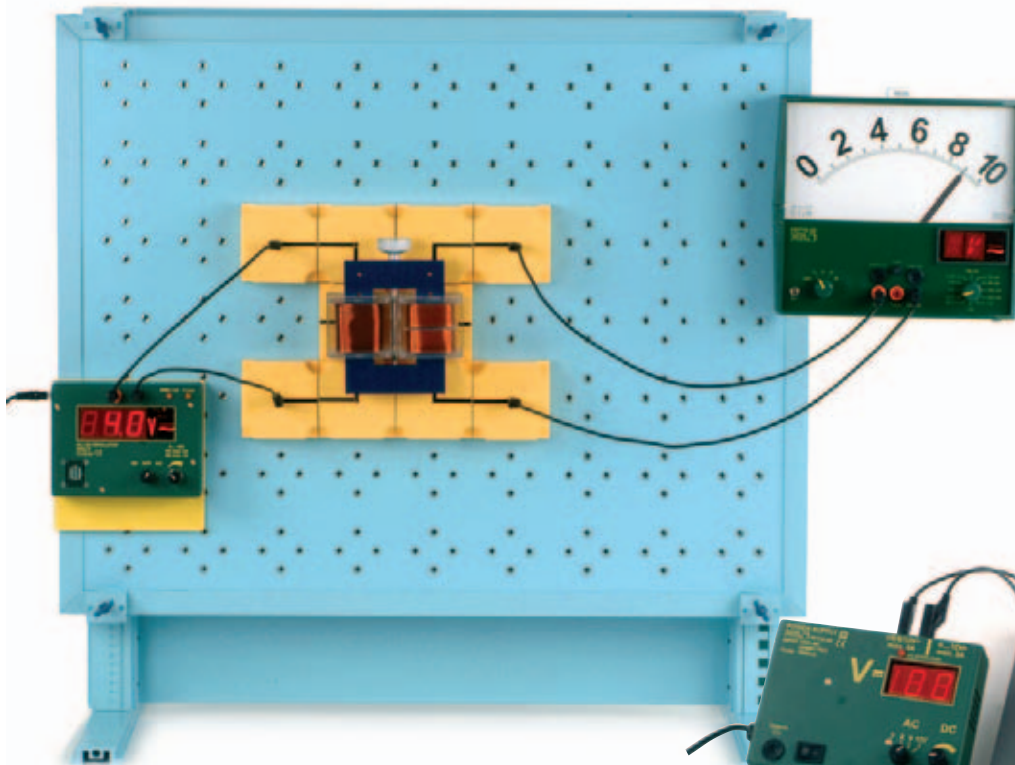


Experiment: Two-way switch, demo

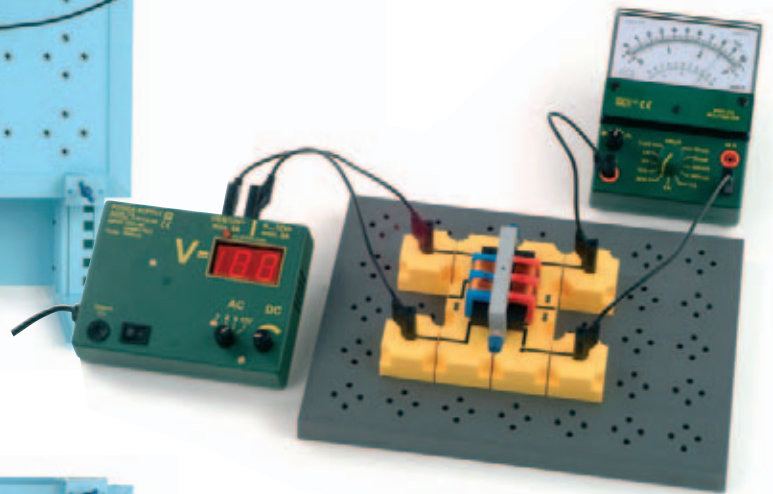


Experiment: Two-way switch, students

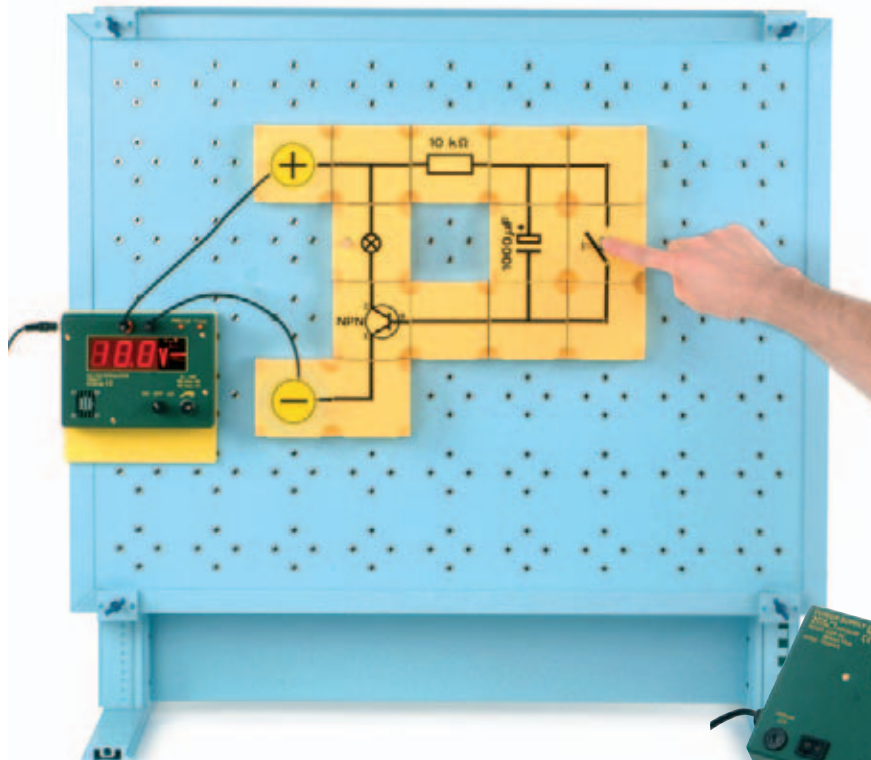
# plug-in system - demo & students



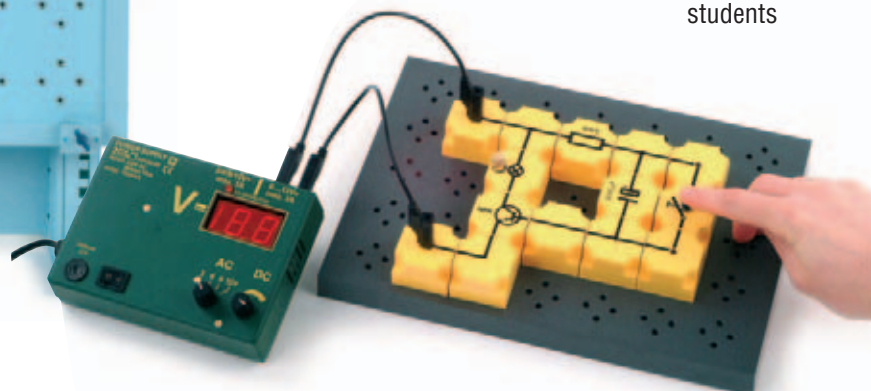
Experiment: Transformer, demo



Experiment: Transformer, students



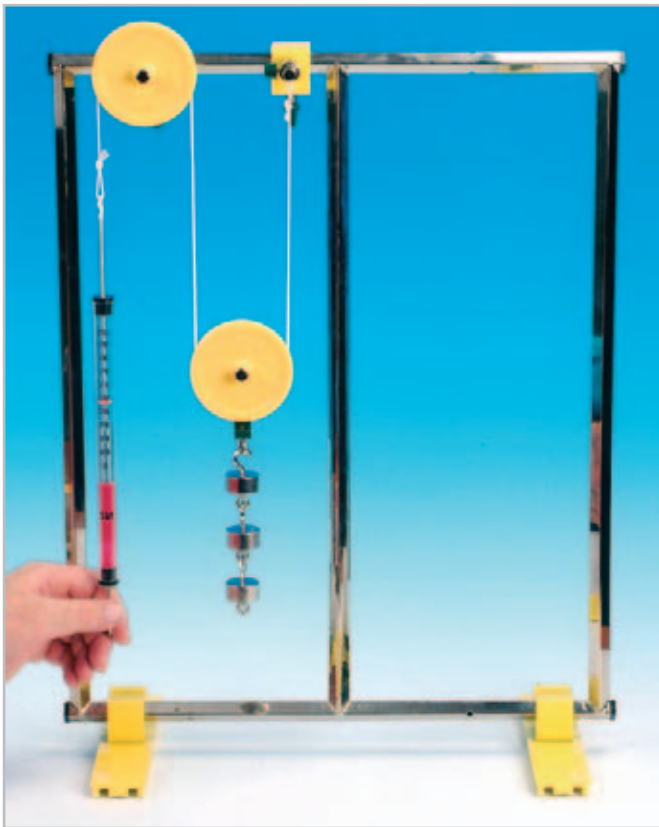
Experiment: Stairwell lighting, demo



Experiment: Stairwell lighting, students



## plug-in system - demo & students



Fast and easy assembly thanks to the  
400 x 500 mm compact support frame



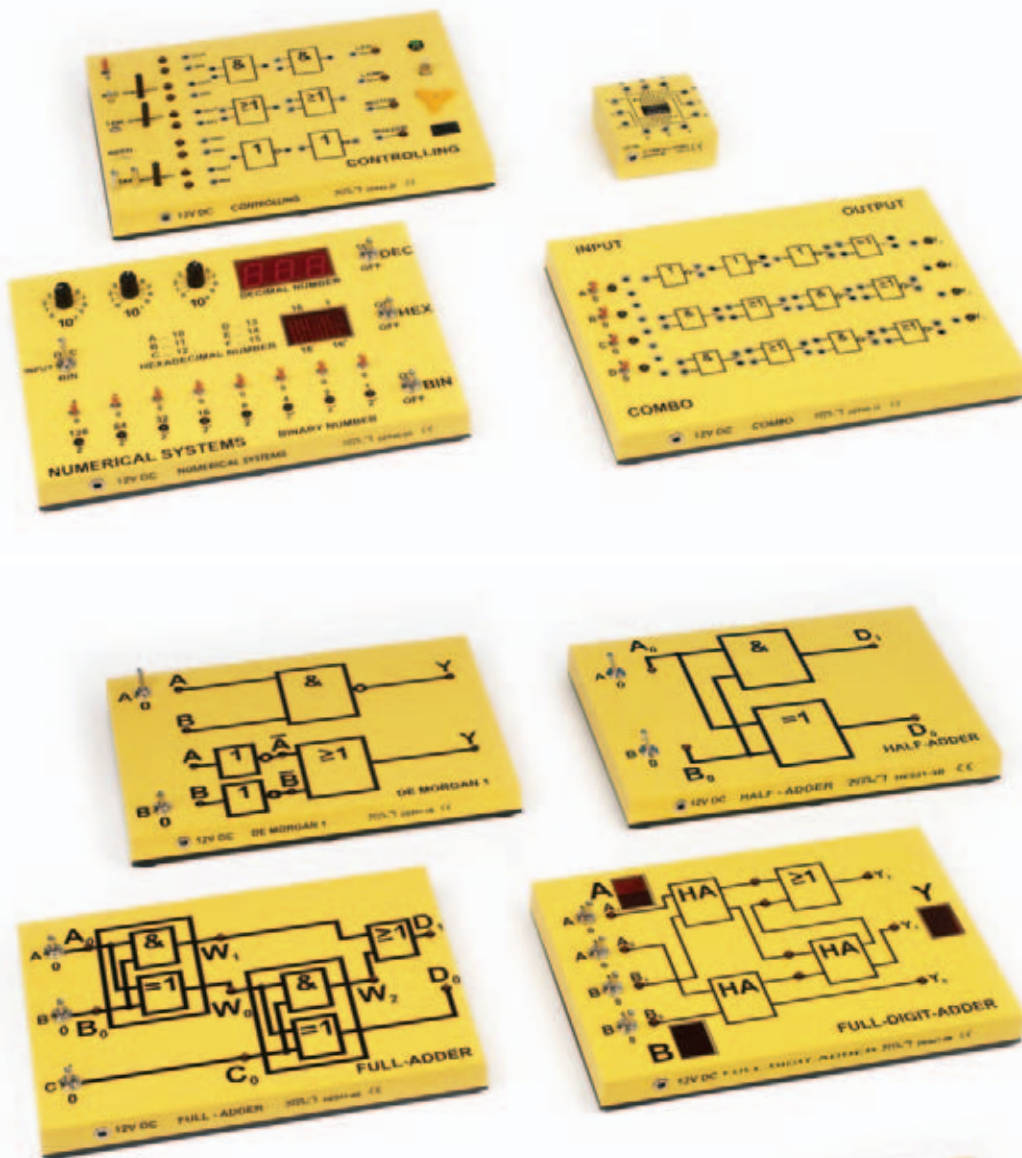
See pages 198 ff for more detailed information on this system.





# logic system - demo & students

Equipment system for investigating the principles of digital technology



## 52 experiments

on the topics of:

- Number systems
- Universal elements

## 22 experiments

on the topics of:

- Simple and complex gate functions
- Dynamic functions
- "Interface to the analogue world"

The system is especially designed so that demo and student experiments are set up in exactly the same way

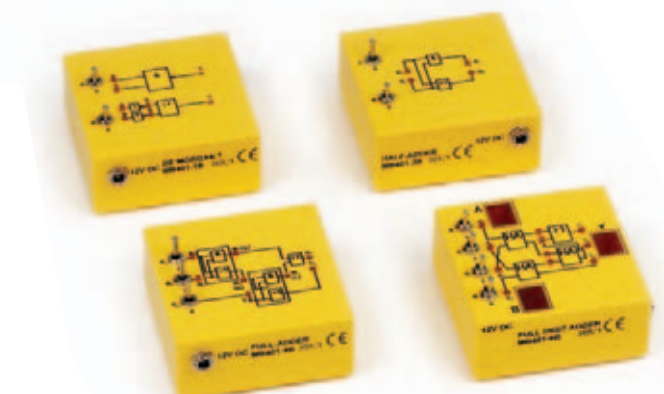
All system elements have built-in neodymium magnets for sticking them to steel panels

Element size:

**MPL (magnetic panel for logic): 310x220x27 mm**

**MBL (magnetic module blocks for logic):**

**84x84x39 mm**



See pages 432 ff for more detailed information on this system.

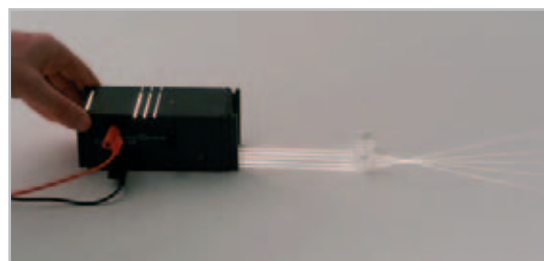
# optics system - demo & students



Complete with support bases, pair, DS602-3A; used with white back panel of plug-in panel for electricity DE920-1A as a magnetic optics panel, mounted using pair of panel holders DS503-1P.



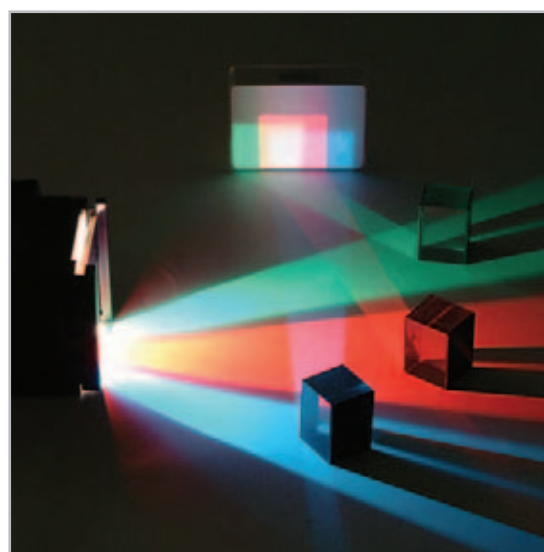
**Experiment:** Shadows from a halogen lamp



**Experiment:** Path of light rays through a convex lens



**Experiment:** Back of demo plug-in panel for electricity DE920-1A as a magnetic optics panel - umbra and penumbra



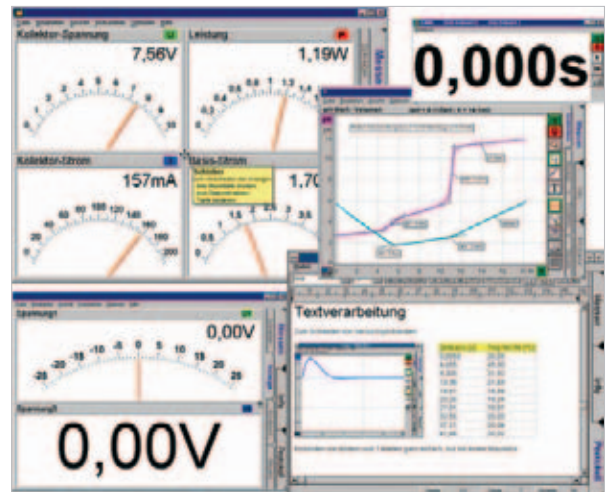
**Experiment:** Additive mixture of colours



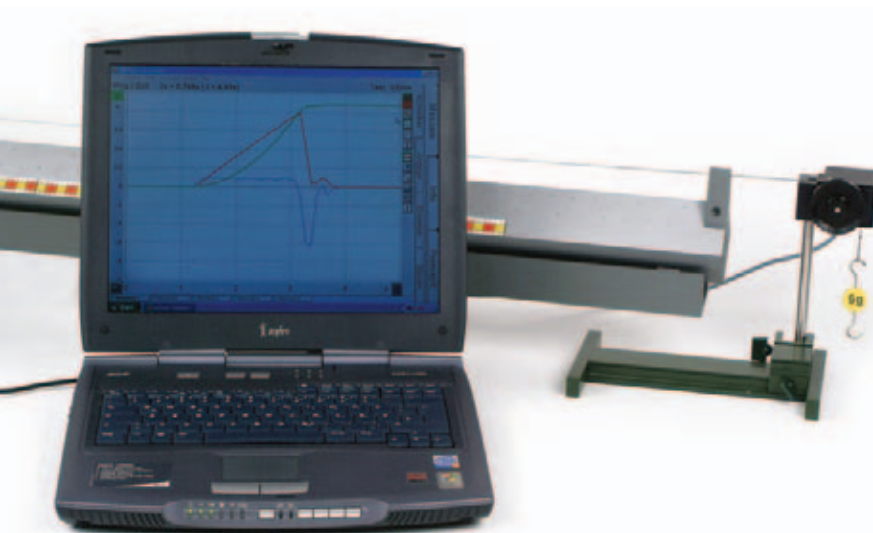
# catt system

The use of a measurement interface is essential for precise, quantitative evaluation of many experiments, particularly at the upper secondary level.

The CATT system consists of an outstanding software system (CATT-Soft), a measurement interface for physics (CATT 4), a measurement interface for chemistry (CATT 5) along with an assortment of sensors for taking readings.



CATT-Soft: features easy, clearly-structured operation, a variety of screen views, easy exporting of measurement data for processing with other programs, menu-driven calibration (See pages 510 and 511 for detailed information)



**Experiment:** Uniformly accelerated motion

A number of channels may be linked to different equations at the same time, allowing quick evaluation of results and saving time



**Experiment:** Atwood's machine

The results of one series of experiments may easily be “superimposed” upon each other or additional documentation included

See pages 506 ff for more detailed information on this system.

# student experiment system



The student experiment system consists of modules on the topics of mechanics, thermodynamics, electricity, magnetostatics, electrostatics, electromagnetism, electronics, optics and chemistry.

This equipment system was the “birth” of NTL. The system has proven itself for over a decade and still continues to enjoy an enthusiastic reception the world over.

It is carefully designed, from a storage system that is sculptured to equipment and includes durable, stackable plastic chests with lids as well as plans for storing and replacing equipment, simple reordering of individual replacement parts, and on down to experiment manuals designed specifically for students by education professionals.



Experiment manuals offer detailed instructions for performing more than 300 physics and 100 chemistry experiments.



Experiments may be done anywhere - even at the education fair stand at Cologne.

See pages 522 ff for more detailed information on this system.



What could go wrong here?

